IADS User Conference 2004

Advanced use of IADS Variables

Harry Evans

ARINC

hevans@arinc.com

719-570-8725

April 7, 2004

I. Introduction

IADS variables are a powerful tool that can change a simple SGML viewer into a robust IETM environment. IADS variables can be used in a way much more powerful than simple variable assignment or queries.

A. IADS Variable Characteristics

1. Stored in memory.
2. Viewed or Changed from IADS Author using the Tools Pull-down: Show Entity List
3. Controlled (Add, Change, Test) via Processing Instructions

B. Memory variables can be used to create dynamic environments (Examples)

II. IADS Variable Processing Instructions

IADS Processing instructions are used to create, populate, extract, display and test IADS variables. IADS variables processing instructions can be divided into the following categories.

1. Assigning Values to Memory Variables Processing instructions
2. Extracting Memory Variable Values Processing Instructions
3. Displaying Memory Variable Values Processing Instructions
4. Testing Memory Variable Values
5. Miscellaneous

1 Assigning Values to Memory Variables Processing Instructions

IADS variables can be updated by several methods.

1-1 <?preloaddatabase...?>

1-2 <?assign...?>

1-3 **<?query...?>**

1-4 **<?calc...?>**

1-1 PreloadDatabase Processing Instruction

Pre-populates IADS memory variables with values found in specified file when IADS Document Instance opened

a. Format: <?preloaddatabase href="[File Name]"?>

Example: <?preloaddatabase href="c:\tdms\ArchiveManual.rsp"?>

b. Comments:

(1) <?preloaddatabase...?> must be placed after <!DOCTYPE [Root Tag]...> and before Root Tag

(2) File must be in Windows INI format

c. Preload Database Processing Instruction Example File

1-1 Variable Display Example

Inserting <?preloaddatabase href="c:\iads\response\conf.rsp"?> after the <!DOCTYPE...> and before the root tag (<preload>) results in updating the following list when file conf.rsp contains:

```
[Responses]
CarMake=Chrysler
Carmodel=Concorde
CarColor=Gold
```

CarMake	Chrysler
CarModel	Concorde
CarColor	Gold

1-2 Assign Processing Instruction

Creates or Updates IADS Memory Variable

a. Format: <?assign variable = "[Variable Name]" value="[Variable Value]" repaint="[TRUE or FALSE]"?>

b. Assign can be invoked three ways

(1) Automatically: Variable updated when a frame is opened

Example: <?assign variable="CurrPara" value="1-4.1" repaint="TRUE"?>

(2) User Interaction via a hotspot

Example: <hotspot linktype="assign" variable="CarMake" value="Chrysler" repaint="TRUE"?>

(3) External Program: Variable Updated via external program via toclip32

Example: c:\iads\programs\toclip32 "IADS::<?assign variable='StatusPDF' value='Failed' repaint='TRUE'?>"

c. Examples

(1) Assign Processing Instruction:

- <assign variable="Assign" value="Purple repaint="TRUE"?> assigns "Purple" to the memory variable "Assign"
- Assign Variable Value = Assign

(2) Assign Processing Instruction from External Program

- Assign "Orange" to variable "Color" from External Program

a. Format: <?assign variable = "[Variable Name]" value="[Variable Value]" repaint="[TRUE or FALSE]"?>

b. Assign can be invoked three ways

(1) Automatically: Variable updated when a frame is opened

Example: <?assign variable="CurrPara" value="1-4.1" repaint="TRUE"?>

(2) User Interaction via a hotspot

Example: <hotspot linktype="assign" variable="CarMake" value="Chrysler" repaint="TRUE"?>

(3) External Program: Variable Updated via external program via toclip32

Example: c:\iads\programs\toclip32 "IADS::<?assign variable='StatusPDF' value='Failed' repaint='TRUE'?>"

c. Examples

(1) Assign Processing Instruction:
- <assign variable="Assign" value="Purple repaint="TRUE"?> assigns "Purple" to the memory variable "Assign"
- Assign Variable Value = Assign

(2) Assign Processing Instruction from External Program
- Assign "Orange" to variable "Color" from External Program
- Assign variable value = Color

1-3 Query Processing Instruction

Creates or updates IADS memory variable via user interaction

a. Format: <?query text="[Text displayed in query box]" result="[Variable Name]" default="[Default Value]" datatype="[NUMERIC or STRING]"?>

Example: <?query text="Enter Document Type" result="DocType"?>

Example: <?query text="Enter Adjustment Factor" result="AdjFact" default="2.0" datatype= "NUMERIC"?>

b. Comments

(1) Screen display will not be updated via Query Processing Instruction. It is necessary to change frames or Reload document to update display

c. Examples

(1) <?query text="Enter your favorite color" result="MyColor" default="Purple"?>
MyColor Variable Value = Purple

(2) <?query text="Enter Number of Gallons in Spare Tank" result="Gallons" default="10.4" datatype= "NUMERIC"?>
Gallons Variable Value = 10.40

1-4 Calc Processing Instruction

Performs an arithmetic calculation and places the result in variable value

a. Format: <?calc expr="[Expression]" result="[Variable Name]"?>

Example: <?calc expr="19 * 4" result="Math"?>

b. Comments

(1) In expressions, variables are used without $ prefix

c. Examples

(1) <?calc expr="19 * 4" result="Math"?>

2. Extracting Memory Variable Values Processing Instructions

IADS variables and associated values can be saved to external files. (Older IADS versions saved variable values in a database or an INI file)

2-1 <?save...?>

2-2 <?dump...?>

2-1 Save Processing Instruction

Saves current document variables to an external file in Windows INI format

a. Format: <?save item="Responses" default ="[File Name]"?>

Example: <?save item="Responses"> : Save to file c:\iads\response\[User Name].rsp

Example: <?save item="responses" default="c:\sample\doc.rsp"?> : Save to file c:\sample\doc.rsp>

b. Comments

(1) Requires user interaction ("Save Responses As" window appears)

(2) Suggested IADS Improvement: Save responses without user interaction.

c. Example:

(1) Save Processing Instruction Example
- <?save item="Responses" default="c:\iads\response\save.rsp"?>
- c:\iads\response\save.ini

(2) Save Processing Instruction using External Program Example
- c:\iads\programs\toclip32 "IADS::<?save item='Responses' default='c:\iads\response\all.rsp'">
- c:\iads\response\all.rsp

2-2 Dump Processing Instruction

Saves a specific variable to an external file in Windows INI format

a. Format: <?dump var="[Variable name]" to="[File Name]" ?>

Example: <?dump var="StatusPDF" to="c:\tdms\status.rsp"?>

b. Comments:

(1) Does not require user interaction

(2) Returns a "blank" value if the variable does not exist

c. External Program can examine IADS memory variable via toclip32

Example: c:\iads\programs\toclip32 "IADS::<?dump var='StatusPDF' to='c:\tdms\status.rsp'?>

d. Example

(1) Dump Processing Instruction Example
- Place "IADS CONFERENCE 2004" in "DumpValue variable
- <?dump var="DumpValue" to="\iadsconf04\DumpValue.txt"?>
- \iadsconf04\DumpValue.txt

(2) Dump Processing Instruction using External Program Example
- Place "Huntsville, Alabama" in "DumpValue" variable
- c:\iads\programs\toclip32 "IADS::<?dump var='DumpValue' to='\iadsconf04\DumpValue.txt'?>
- \iadsconf04\DumpValue.txt

3. Displaying Memory Variable Values Processing Instructions

IADS Variable values can be displayed on screen using multiple methods

3-1 Character Entity

3-2 **<?display variable...?>**

3-3 **<?display expr...?>**

3-1 Display Variable using Character Entity Example

IADS variables can be displayed using character entities. Note that IADS Variables are stored in the same memory space as character entities.

a. Format: &[Variable name];

Example: &StatusPdf;

b. Comments: If a variables does not exist, the character entity name is displayed

c. Example

(1) Display variable using character entity example
- Set "ProduceType" variable to "fruit"
- Apples are a fruit

3-2 Display Variable using Display Processing Instruction Example

IADS variables can be displayed in-line on screen or in a message box

a. Format: <?display variable="[VariableName]" decimals="[Decimal Places]" round="[Y or N]" message="[Y or N]" title="[Message box title]" pretext="[Message box pre text]" posttext="[Message Box Post Text]"?>

Example: <?display variable="StatusPDF"?>

Example: <?display variable="Voltage" decimals="2" round="N" message="Y" title="-5 VDC power supply voltage", Pretext="TP1 - " posttext=" - TP7"?>

b. Comments

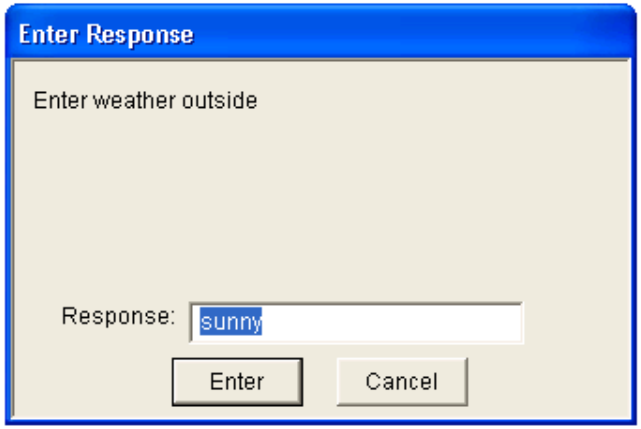
(1) Can be used to display a string or numeric value

(2) Can be used to populate a message box

(3) An IADS Error will be generated if the variable does not exist

c. Example

(1) Display variable using Processing Instruction
- Query Box
- The Weather is sunny



3-3 Display Expression Processing Instruction Example

Displays a manipulated variable value on screen

a. Format: <?display expr="[Expression]"]" decimals="[Decimal Places]" round="[Y or N]" message="[Y or N]" title="[Message box title]" pretext="[Message box pre text]"

Example: <?display expr="Voltage * 2.65" decimals="2" round="N" message="Y" title="-5 VDC power supply voltage", Pretext="TP1 - " posttext=" - TP7"?>

b. Comments: Variable Names are represented without a prefix ($)

c. Example

(1) Display an expression
- Query Box
- Adjusted Voltage (<?display expr="Voltage * 2.65" decimals="2" round="N"?>) = 5.29

4 Testing Memory Variable Values Processing Instruction

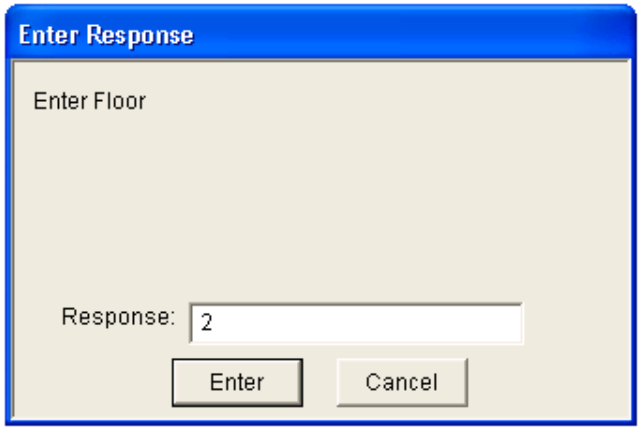
Testing Memory Variable Values Processing Instruction. IADS can text and branch based on a variable value

a. Format: <?if test="[Variable Name] [Operator] [Test Value]"?>[Display]<?endif?>

Example: <?if test="Color == Red"><red>I See Red</red><?endif?>

c. Example

- Query Box
- <?if test="Floors == 1"> <para>Ground Floor</para> <?else?> <para>Upper Floor</para> <?endif?>
- You are on the Upper Floor



5 Miscellaneous Memory Processing Instructions

IADS 3.0 version used a database to store memory variables. Using this processing instruction will cause IADS to revert back to the previous format

a. Format: <?UseOBDCDatabase?>

Example: <?UseOBDCDatabase?>

b. Comments

(1) IADS "runs" considerably slower because of the database interface

(2) IADS is slow to post variable updates requiring external program to delay processing waiting for an update

(3) The only method of examining variable values prior to the <?dump...?> processing instruction

III Advanced IADS use examples

The following examples show how to use IADS variables in a more robust fashion

A. IDMS. The Technical Data Management System Administrative Manual guides the user through the steps necessary to import a document into the system.

(1) Initially all required variables are preloaded

Example: <?preloaddatabase href='..\..\iads\response\AdminManual.rsp'?>

Example: AdminManual.rsp

(2) As each step is completed an OmniMark program is called to check that the user action has been properly completed.

(a) If a successful action has been completed, the action being performed variable (for example, "StatusPDF") is set to "Successful", the ErrorMsg variable is set to "None", and the next action (for example, "StatusHTML") is set to "Ready".

(b) If a the action has not been successful, the action being performed variable (for example, "StatusPDF") is set to "Failed" and the "ErrorMsg" is updated.

(c) Example

Example: <status>
<para><hotspot>STATUS<action>
<?execute program='$(omnimark) -load $(pgms)valid-GPStdms.xvc'>
<?execute program='$(omnimark) -load $(pgms)udsum.xvc -d sumdata "Copy PDF Files"'>
</action></hotspot> &StatusPDF;

StatusPDF") is set to "Successful", the ErrorMsg variable is set to "None", and the next action (for example, "StatusHTML") is set to "Ready".

(b) If a the action has not been successful, the action being performed variable (for example, "StatusPDF") is set to "Failed" and the "ErrorMsg" is updated.

(c) Example

```
Example: <status>
 <para><hotspot>STATUS<action>
 <?execute program='$(omnimark) -load $(pgms)valid-GPStdms.xvc'>
 <?execute program='$(omnimark) -load $(pgms)udsum.xvc -d sumdata "Copy PDF Files"'>
 </action></hotspot> &StatusPDF;
 <?if test='$ErrorMsg != None'> :&ErrorMsg;
 <?endif>
 </para>
 </status>
```

(3) The user cannot skip steps

(4) The user cannot repeat a successful step

(5) In addition to iads variables, IADS passwd file, and User INI files are manipulated via OmniMark script

AdminManual.rsp - Notepad

File Edit Format View Help

```
[Responses]
DocType=PDF
StatusPDF=Successful
StatusHTML=Ready
StatusAbbrPDF=Step Disabled - Previous Step Not Completed
StatusJPG=Step Disabled - Previous Step Not Completed
StatusSGMLProfile=Step Disabled - Previous Step Not Completed
StatusXfer=Step Disabled - Previous Step Not Completed
StatusValidate=Step Disabled - Previous Step Not Completed
StatusFinalQA=Step Disabled - Previous Step Not Completed
StatusIADSCopy=Step Disabled - Not Importing an IADS Document
StatusIADS=Step Disabled - Not Importing an IADS Document
StatusMSOCopy=Step Disabled - Not Importing a Microsoft Office Document
StatusScan=Step Disabled - Not Importing a Scanned Document
StatusOCR=Step Disabled - Not Importing a Scanned Document
StatusKywd=Step Disabled - Not Open as Administrator
StatusUdProfile=Step Disabled - Not Open as Administrator
StatusCompleteLoad=Step Disabled - Not Open as Administrator
StatusDel=Step Disabled - Not Open as Administrator
ErrorMsg=None
CurrentFrame=Frm-Copy PDF Files
```

DEFAULT

e user through the

(2) As each step is completed an OmniMark program is called to check that the user action has been properly completed.

(a) If a successful action has been completed, the action being performed variable (for example, "StatusPDF") is set to "Successful", the ErrorMsg variable is set to "None", and the next action (for example, "StatusHTML") is set to "Ready".

(b) If a the action has not been successful, the action being performed variable (for example, "StatusPDF") is set to "Failed" and the "ErrorMsg" is updated.

(c) Example

Example: <status>

```
<para><hotspot>STATUS<action>
<?execute program='$(omnimark) -load $(pgms)valid-GPStdms.xvc'>
<?execute program='$(omnimark) -load $(pgms)udsum.xvc -d sumdata "Copy PDF Files"'>
</action></hotspot> &StatusPDF;
```

c:\iadsconf04\conf04.ide 3.2.0007

start Microsoft Pow... 2 Windows E... IADS VARIABLES AdminManual.r... 11:24 AM

passwd - Notepad

File Edit Format View Help

```
root::10:1:Root Login:/iads/etc:C:\IADS/etc/root.ini
guest::12:1:Guest Login:/iads/help:C:\IADS/etc/guest.ini
GUEST::12:1:Guest Login:/iads/help:C:\IADS/etc/guest.ini
admin::20:1:Administrative Login:/iads/etc:c:\IADS/etc/admin.ini
reads::22:1:Reading Login:/iads/etc:c:\IADS/etc/reading.ini
ZZZU::30:1:Document ZZZU Import:\tdms\:c:\iads\etc\ZZZU.INI
```

er action has been

ble (for example,
and the next action

(for example,

```
<para><hotspot>STATUS<action>
<?execute program='$(omnimark) -load $(pgms)valid-GPStdms.xvc'>
<?execute program='$(omnimark) -load $(pgms)udsum.xvc -d sumdata "Copy PDF Files"'>
</action></hotspot> &StatusPDF;
<?if test='$ErrorMsg != None'> :&ErrorMsg;
<?endif>
</para>
</status>
```

(3) The user cannot skip steps

(4) The user cannot repeat a successful step

(5) In addition to iads variables, IADS passwd file, and User INI files are manipulated via OmniMark script

c:\iadsconf04\conf04.ide 3.2.0007

start Microsoft Pow... 2 Windows E... IADS VARIABLES 2 Notepad 11:25 AM

ZZZZ.ini - Notepad

File Edit Format View Help

```
[UES]
iadsdoc=c:\tdms\manual\GPS-TDMSum.sgm !Frm-Copy PDF Files
```

er action has been

ble (for example,
and the next action

(for example,

```
<para><hotspot>STATUS<action>
<?execute program='$(omnimark) -load $(pgms)valid-GPStdms.xvc'>
<?execute program='$(omnimark) -load $(pgms)udsum.xvc -d sumdata "Copy PDF Files"'>
</action></hotspot> &StatusPDF;
<?if test='$ErrorMsg != None'> :&ErrorMsg;
<?endif>
</para>
</status>
```

(3) The user cannot skip steps

(4) The user cannot repeat a successful step

(5) In addition to iads variables, IADS passwd file, and User INI files are manipulated via OmniMark script

c:\iadsconf04\conf04.ide 3.2.0007

start Microsoft Pow... IADS Conference IADS VARIABLES ZZZZ.ini - Note... 11:26 AM

GPS-TDMS
Administrative Process

This electronic document provides detailed instructions for performing GPS-TDMS document import and adminstrative functions.

Select one of the following:

Document Import Functions

Add New IADS Document

Add New PDF Document

Add New Microsoft Office Document

Document(s) in progress: ZZZU

Adminstrative Functions (Update Document, Add Keyword, Delete Document, Examine Adminstrative Messages, System Power Up and Shutdown, Admin/User Workstation Installation Procedures, Server Installation Procedures, and File Plan Maintenance)

Reading GPS-TDMS (User Manual Only, No Actions Taken)

4-1.2 Copy PDF File(s) to Working Directory Use the following procedure to copy PDF file(s) to the working directory:

STATUS ***Failed :No PDF Files found in c:\tdms\ZZZT***

a. Open Windows Explorer **Open Windows Explorer application**

b. Use Windows Explorer to copy PDF file(s) into the working directory (c:\tdms\ZZZT)

Next Step

B. Extract from TM 10646-CDThis Technical Manual IETM forces the user to complete each step before progressing to the next step.

(1) As each step is completed, the users initials are placed before each step

(2) The user is then allowed to progress to the next step.

Example

Example: <init>

```
<?if test="$IP3-2.1S1 != ___">
<hotspot linktype="assign" variable="IP3-2.1S2" value="&init;" repaint="TRUE">
&IP3-2.1S2;</hotspot>
<?else>
<hotspot linktype="message" href="Step 1 not complete, complete step 1" popup="1">
&IP3-2.1S2;</hotspot>
<?endif>
</init>
```

SECTION II

Cabling Installation

3-2 Cabling Installation

The following paragraphs describe the installation of the MAPS cables on the HMMWV and ATG Trailer.

3-2.1 W101 Cable Assembly Installation The following step-by-step procedure describes the installation of the W101 Cable on the ATG Trailer.

HE **Step 1: Remove cover from J3 connector of the DRUH.**

HE **Step 2: Remove cover from P3 of the W101 Cable Assembly.**

___ **Step 3: Align and attach P3 to J3 connector on the DRUH.**

Step 3 not complete, complete step 3

___ **Step 4: Route the W101 Cable Assembly along the left wall of the DRUH well clamping the cable in the middle clamp of the clamp assembly located next to the DRUH.**

___ **Step 5: Remove cover from P2 of the W101 Cable Assembly.**

___ **Step 6: Align and attach P2 to the J2 connector on the Switch Box Assembly.**

End 3-2.1 Reset INITIALs
COMPLETE STEPS

IV. IADS Memory Variable Processing Instruction Tables

A. Assigning Values to a Memory Variable Processing Instructions

B. Saving/Extracting Memory Variable Values Processing Instructions

C. Display Memory Variables Processing instructions and Character Entities

D. Testing Memory Variable Values Processing Instructions

E. Miscellaneous Memory Processing Instructions

Table 1-1. Assigning Values to a Memory Variable Processing Instructions

Processing Instruction	Definition	Format Example	Attributes (PI) or expression Name (O)ptional or (M)andatory	 Description	Comments
<?preloaddatabase...?> –	Pre-populates IADS memory variables with values found in specified file	<?preloaddatabase href = "File Name"?> <?PreloadDatabase href = "datafile.dat"?>	href (M)	File Name	1. Must be placed after DOCTYPE and before root tag. 2. File must be in Windows INI format with [Responses] header[1]
<?assign ...?>	Populates IADS memory variable	<?assign variable = "Variable Name " value = "Variable Value" repaint = "TRUE or FALSE"?> <?assign variable="CarMake" value= "Chevrolet" repaint="TRUE"?>	Variable (M) value (M) repaint (O)	Variable Name Variable Value Refresh IADS indicator: TRUE or FALSE (default)	1 Can be assigned using a hotspot tag or hotspot processing instruction with an "Assign" linktype attribute value 2 Can be used to assign a variable value by an external program via toclip32.exe. Example: c:\iads\programs\ toclip32 "IADS:: <?assign ...?>"

1
Response file (in Windows INI format) format:

Table 1-1. Assigning Values to a Memory Variable Processing Instructions (Continued)

Processing Instruction	Definition	Format Example	Attributes (PI) or expression Name (O)ptional or (M)andatory	 Description	Comments
<?query ...?>	Populates IADS memory variable via IADS interactive input	<?query text = "Text displayed in query box" result = "Variable Name" default = "Default Value" datatype = "NUMERIC | STRING"?>	text (M)	Text to be displayed in query window	Screen display will not be updated via Query Processing Instruction. It is necessary to change frames or Reload document to update display
			result (M)	Variable Name	
		<?query text = "Document Type" result = "DocType"?> <?query text = "Adjustment Factor" result = "AdjFact" default = = "2.0" datatype = "NUMERIC"?>	default (O)	Default value	
			datatype (O)	NUMERIC or SRING (default) format	
<?calc ...?>	Performs arithmetic operations and stores value in memory variable	<?calc expr = "Expression" result = "Variable Name">	expr (M)	Arithmetic expression	In expressions, Variables names are used without $ prefix
		<?calc expr="sqrt(16) * 10 - (2 - exp(4))" result="temp">	result (M)	Variable Name	

Table 1-2. Saving/Extracting Memory Variable Values Processing Instructions

Processing Instruction	Definition	Format Example	Attributes (PI) or expression Name (O)ptional or (M)andatory	 Description	Comments
<?save ...?>	Save current document variables to an external file	<?save item = "Responses" default = "File Name"?>	item (M)	Must be 'Responses'	1 Saves all responses for current user to named file in iads\ response directory. 2 If no default attribute, saves as c:\iads\response\ UserName.rsp 3 Can be used extract all variable values by an external program via toclip32.exe.Example: : c:\iads\programs\toclip32 "IADS:: : <?save ...?>"
		<?save item = "Responses" default = "doc.rsp"?> <?save item="Responses">	default (O)	File Name (no default => UserName.rsp)	
<?dump ...?>	Save a particular variable to an external file	<?dump var = Variable Name' to = ' File Name'?>	var (M)	Variable Name	Can be used extract one variable value by an external program via toclip32.exe. Example: c:\iads\programs\ toclip32 "IADS:: <?dump ...?>"
		<?dump var = 'StatusPDF' to = 'status.rsp'?>	to (M)	File Name	

Table 1-3. Display Memory Variables Processing instructions and Character Entities

Processing Instruction	Definition	Format Example	Attributes (PI) or expression Name (0)ptional or (M)andatory	 Description	Comments
Character Entity	Display memory variable on screen	&Variable Name; &StatusPDF;	N/A	N/A	If character entity (variable) does not exist, the character entity name will be displayed
<?display variable ...?>	Displays memory variable on screen	<?display variable = "Variable Name" decimals = "Decimal places" round = "Y | N" message = "Y | N" title = "Message box title" pretext = "Message box pre text" posttext="Message box post text">	variable (M)	Variable Name	1 Can be used to display a simple string or numeric value. 2 Can be used to format and populate a message box. 3 An IADS Error will be generated if the variable does not exist
			decimals (O)	Number of decimal places Default 0	
			round (O)	round numeric value:Y (default) or N	
		<?display variable = "StatusPDF">	message (O)	Display in message box: Y or N (default)	
		<?display variable = "Voltage" decimals = "2" round="N">	title (O)	Title for message box	
		<?display variable = "Voltage" decimals = "2" round="N" message="Y" title="-5 VDC power supply voltage" pretext="TP--1 " posttext=" TP-7">	pretext (O)	Text to be displayed before variable in message box	

Table 1-3. Display Memory Variables Processing instructions and Character Entities [24 of 28]

			or (M)andatory		
Character Entity	Display memory variable on screen	&Variable Name; &StatusPDF;	N/A	N/A	If character entity (variable) does not exist, the character entity name will be displayed
<?display variable ...?>	Displays memory variable on screen	<?display variable = "Variable Name" decimals = "Decimal places" round = "Y | N" message = "Y | N" title = "Message box title" pretext = "Message box pre text" posttext="Message box post text">	variable (M)	Variable Name	1 Can be used to display a simple string or numeric value. 2 Can be used to format and populate a message box. 3 An IADS Error will be generated if the variable does not exist
			decimals (O)	Number of decimal places Default 0	
			round (O)	round numeric value: Y (default) or N	
		<?display variable = "StatusPDF">	message (O)	Display in message box: Y or N (default)	
		<?display variable = "Voltage" decimals = "2" round="N">	title (O)	Title for message box	
		<?display variable = "Voltage" decimals = "2" round="N" message="Y" title="-5 VDC power supply voltage" pretext="TP--1 " posttext=" TP-7">	pretext (O)	Text to be displayed before variable in message box	
			posttext (O)	Text to be displayed after variable in message box	

Table 1-3. Display Memory Variables Processing instructions and Character Entities (continued)

Processing Instruction	Definition	Format Example	Attributes (PI) or expression Name (O)ptional or (M)andatory	 Description	Comments
<?display expr ...?>	Displays an expression (manipulated memory variable) on screen	<?display expr = "Expression" decimals = "Decimal places" round = "Y | N" message = "Y | N" title = "Message box title" pretext = "Message box pre text" posttext = "Message box post text">	expr (M)	Valid IADS Expression	1 In expressions, variables names are used without $ prefix 2 An IADS Error will be generated if the variable does not exist
		<?display expr = "$Voltage * 2.65" decimals = "2" round = "N" message = "Y" title = "-5 VDC power supply voltage" pretext = "TP-1" posttext = " TP-7">	Same as display variable	Same as display variable except expr instead of variable attribute	

Table 1-4. Testing Memory Variable Values Processing Instructions

Processing Instruction	Definition	Format Example	Attributes (PI) or expression Name (O)ptional or (M)andatory	 Description	Comments
<if test="Test Expression"?>...<? endif?>	Identify and use variables in expressions	<?if test="$Variable Name Operator Test Value or Variable Name"?> <?if test="$StatusPDF == Failed"?>	$	Identify variable name via $ function	

Table 1-5. Miscellaneous Memory Processing Instructions

Processing Instruction	Definition	Format Example	Attributes (PI) or expression Name (O)ptional or (M)andatory	 Description	Comments
<?UseODBCdatabase?>	Use IADS_DBA.mdb database instead of internal memory variable storage	<?UseODBCdatabase?>	N/A	N/A	1 IADS runs considerably slower because of the database interface 2 IADS slow to detect changes in IADS_DBA.mdb made by an external program

V. Windows INI Format

a. Windows INI Format:

Example: [Section]

Example: [Name]=[Value]

b. Example:

```
[Responses]
Assign=Purple
Color=Orange
Gallons=0.0
MyColor=Purple
Math=0.0
```